

Keywords: Search engines, Web searching, agent searching

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1 Modeling methodology: Resource graphs for modeling large-scale, highly congested
Systems Paul Hyden, Lee Schruben, Theresa Roeder December 2001 Proceedings of the 33nd conference on Winter simulation WSC '01 Publisher: IEEE Computer Society  Full text available: To pdf(425.35 KR) Additional Information: full citation, abstract, references, citings, index
ruli text available. (A25.35 KB) terms
Simulations often execute too slowly to be effective tools for decision-making. In particular, this problem has been found in semiconductor manufacturing where conventional job-driven simulation models explicitly track each lot of wafers as it progresses through the system. While a job-driven simulation model offers some advantages, they inherently execute slowly. This paper explicitly defines resource-driven modeling. Here jobs are implicitly tracked through their resource usage. Resource-drive
<sup>2</sup> A display and analysis tool for process-resource graphs
M. H. Samadzadeh, B. S. Koshy January 1996 ACM SIGOPS Operating Systems Review, Volume 30 Issue 1  Publisher: ACM Press Full text available: pdf(1.21 MB)  Additional Information: full citation, abstract, index terms
This paper describes the design and implementation of a graphical tool called Prograph which enables users to model and analyze operating systems process-resource graphs. The Prograph program enables users to model operating system Process-Resource graphs rapidly, analyze the graphs, and then view the different stages of the deadlock analysis. The deadlock representation and analysis tool Prograph was prototypically evaluated by the students in the graduate level Operating Systems class as well
Some deadlock properties of computer systems  Richard C. Holt October 1971 Proceedings of the third ACM symposium on Operating systems
principles SOSP '71 Publisher: ACM Press
Full text available: pdf(877.77 KB)  Additional Information: full citation, abstract, references, citings, index terms
First, a "meta theory" of computer systems is developed so that the terms "process" and

"deadlock" can be defined. Next, "reusable resources" are introduced to model objects which are shared among processes, and "consumable resources" are introduced to model signals or messages passed among processes. Then a simple graph model of computer systems is developed, and its deadlock properties are investigated. This graph model is useful ...

4	Comp. Deadlest Desperies of Computer Contract	
~	Some Deadlock Properties of Computer Systems Richard C. Holt	_
<b>③</b>	September 1972 ACM Computing Surveys (CSUR), Volume 4 Issue 3	
	Publisher: ACM Press	
	Full text available: pdf(1.46 MB) Additional Information: full citation, references, citings, index terms	
5	Process interactions and system correctness: Some deadlock properties of computer	
	systems	
<b>A</b>	Richard C. Holt	
	June 1972 ACM SIGOPS Operating Systems Review, Volume 6 Issue 1/2	
	Publisher: ACM Press	
	Full text available: pdf(1.03 MB) Additional Information: full citation, references	
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6	Automatic generation of FPGA routing architectures from high-level descriptions	
۹	Vaughn Betz, Jonathan Rose February 2000 Brospedings of the 2000 ACM (STCDA sighth intermediate)	
•	February 2000 Proceedings of the 2000 ACM/SIGDA eighth international symposium on Field programmable gate arrays FPGA '00	
	Publisher: ACM Press	
	Full text available: pdf(957.37 KB)  Additional Information: full citation, abstract, references, citings, index	
	terms	
	In this paper we present a "high-level" FPGA architecture description language which lets	
	FPGA architects succinctly and quickly describe an FPGA routing architecture. We then present an "architecture generator" built into the VPR CAD tool [1, 2] that converts this	
•	high-level architecture description into a detailed and completely specified flat FPGA	
	architecture. This flat architecture is the representation with which CAD optimization and	
	visualization modules typic	
7	CAD for reconfigurable commutation Dunamic FRCA moution for first in time FRCA	
, _	CAD for reconfigurable computing: Dynamic FPGA routing for just-in-time FPGA	
9	compilation Roman Lysecky, Frank Vahid, Sheldon XD. Tan	
•	June 2004 Proceedings of the 41st annual conference on Design automation DAC '04	
	Publisher: ACM Press	
	Full text available: pdf(73.08 KB)  Additional Information: full citation, abstract, references, citings, index	
	terms	
	Just-in-time (JIT) compilation has previously been used in many applications to enable	
	standard software binaries to execute on different underlying processor architectures.  However, embedded systems increasingly incorporate Field Programmable Gate Arrays	
	(FPGAs), for which the concept of a standard hardware binary did not previously exist,	
	requiring designers to implement a hardware circuit for a single specific FPGA. We	
	introduce the concept of a standard hardware binary, using a just-in-time	
	Keywords: FPGA, codesign, configurable logic, dynamic optimization, hardware/software	
	partitioning, just-in-time compilation, place and route, platforms, system-on-a-chip, warp	

processors

Queuing and scheduling: Lexicographic QoS scheduling for parallel I/O  Ajay Gulati, Peter Varman July 2005 Proceedings of the seventeenth annual ACM symposium on Pa algorithms and architectures SPAA '05  Publisher: ACM Press Full text available: □ pdf(261.78 KB) Additional Information: full citation, abstract, references.  High-end shared storage systems serving multiple independent workloads me that concurrently executing clients will receive a fair or agreed-upon share of resources. In a parallel I/O system an application makes requests for specific different steps of its computation depending on the data layout and its comp state. Different applications contend for disk access making the problem of m fair allocation challenging. We propose a model for differentiate  Keywords: QoS, fair scheduling, lexicographic minimization, parallel I/O, re- allocation, storage virtualization  9 Routing: Solving hard instances of FPGA routing with a congestion-optim restrained-norm path search space Keith So March 2007 Proceedings of the 2007 international symposium on Physica ISPD '07  Publisher: ACM Press Full text available: □ pdf(340.91 KB) Additional Information: full citation, abstract, references, in The negotiated congestion mechanism forms the basis of most published FPG today, with many routers projecting congestion and any other requirements asearch space to evaluate candidate paths. In this paper, we study the numer of these scalar projections as the number of iterations increase. We show that scalar search spaces the norm of path costs increase exponentially with the re iterations, leading to floating-point absorption and represent  Keywords: FPGA, negotiated congestion, routability-driven routing  10 Methods for a priori feasible layout generation: Routing architecture exple regular fabrics  ∨ Kheterpal, A. J. Strojwas, L. Pileggi June 2004 Proceedings of the 41st annual conference on Design automat Publisher: ACM Press  Full text available: □ pdf(271.92 KB)  Additional Information: full citation, abs	index terms ust assure f system I/O c disks at utational	
Full text available:	ust assure f system I/O c disks at utational	
that concurrently executing clients will receive a fair or agreed-upon share of resources. In a parallel I/O system an application makes requests for specific different steps of its computation depending on the data layout and its computate. Different applications contend for disk access making the problem of making and its computation challenging. We propose a model for differentiate  Keywords: QoS, fair scheduling, lexicographic minimization, parallel I/O, resallocation, storage virtualization  Routing: Solving hard instances of FPGA routing with a congestion-optime restrained-norm path search space  Keith So  March 2007 Proceedings of the 2007 international symposium on Physical ISPD '07  Publisher: ACM Press  Full text available: Dot(340.91 KB)  Additional Information: full citation, abstract, references, in the paper, we study the numer of these scalar projections as the number of iterations increase. We show that scalar search spaces the norm of path costs increase exponentially with the miterations, leading to floating-point absorption and represent  Keywords: FPGA, negotiated congestion, routability-driven routing  Methods for a priori feasible layout generation: Routing architecture explorations and a proceedings of the 41st annual conference on Design automate Publisher: ACM Press  Full text available: Def(271.92 KB)  Additional Information: full citation, abstract, references, sterms  In an effort to control the parameter variations and systematic yield problems	f system I/O c disks at utational	
Pouting: Solving hard instances of FPGA routing with a congestion-optime restrained-norm path search space Keith So March 2007 Proceedings of the 2007 international symposium on Physica ISPD '07 Publisher: ACM Press Full text available: pdf(340.91 KB). Additional Information: full citation, abstract, references, in the negotiated congestion mechanism forms the basis of most published FPG today, with many routers projecting congestion and any other requirements of search space to evaluate candidate paths. In this paper, we study the numer of these scalar projections as the number of iterations increase. We show the scalar search spaces the norm of path costs increase exponentially with the reliterations, leading to floating-point absorption and represent  Keywords: FPGA, negotiated congestion, routability-driven routing  Methods for a priori feasible layout generation: Routing architecture explosions are properly and the search space of the 41st annual conference on Design automate Publisher: ACM Press Full text available: pdf(271.92 KB)  Additional Information: full citation, abstract, references, sterms  In an effort to control the parameter variations and systematic yield problems		
restrained-norm path search space Keith So March 2007 Proceedings of the 2007 international symposium on Physica ISPD '07 Publisher: ACM Press Full text available: pdf(340.91 KB) Additional Information: full citation, abstract, references, in the negotiated congestion mechanism forms the basis of most published FPG today, with many routers projecting congestion and any other requirements of search space to evaluate candidate paths. In this paper, we study the numer of these scalar projections as the number of iterations increase. We show that scalar search spaces the norm of path costs increase exponentially with the relations, leading to floating-point absorption and represent  Keywords: FPGA, negotiated congestion, routability-driven routing  Methods for a priori feasible layout generation: Routing architecture explored in the priority of the season of	source	
Publisher: ACM Press Full text available:  pdf(340.91 KB) Additional Information: full citation, abstract, references, in the negotiated congestion mechanism forms the basis of most published FPG today, with many routers projecting congestion and any other requirements of search space to evaluate candidate paths. In this paper, we study the numer of these scalar projections as the number of iterations increase. We show that scalar search spaces the norm of path costs increase exponentially with the reliterations, leading to floating-point absorption and represent  Keywords: FPGA, negotiated congestion, routability-driven routing  Methods for a priori feasible layout generation: Routing architecture explorate to the proceedings of the 41st annual conference on Design automate Publisher: ACM Press  Full text available: pdf(271.92 KB)  Additional Information: full citation, abstract, references, sterms  In an effort to control the parameter variations and systematic yield problems	<del></del>	
The negotiated congestion mechanism forms the basis of most published FPG today, with many routers projecting congestion and any other requirements a search space to evaluate candidate paths. In this paper, we study the numer of these scalar projections as the number of iterations increase. We show that scalar search spaces the norm of path costs increase exponentially with the reliterations, leading to floating-point absorption and represent  Keywords: FPGA, negotiated congestion, routability-driven routing  Methods for a priori feasible layout generation: Routing architecture explosionate to the proceedings of the 41st annual conference on Design automate Publisher: ACM Press  Full text available: pdf(271.92 KB)  Additional Information: full citation, abstract, references, sterms  In an effort to control the parameter variations and systematic yield problems	ıl design	•
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Methods for a priori feasible layout generation: Routing architecture explored regular fabrics  V. Kheterpal, A. J. Strojwas, L. Pileggi June 2004 Proceedings of the 41st annual conference on Design automate Publisher: ACM Press  Full text available: pdf(271.92 KB)  Additional Information: full citation, abstract, references, of terms  In an effort to control the parameter variations and systematic yield problems	onto a scalar ical stability at in these	
regular fabrics  V. Kheterpal, A. J. Strojwas, L. Pileggi June 2004 Proceedings of the 41st annual conference on Design automat  Publisher: ACM Press  Full text available: pdf(271.92 KB)  Additional Information: full citation, abstract, references, on terms  In an effort to control the parameter variations and systematic yield problems		
regular fabrics  V. Kheterpal, A. J. Strojwas, L. Pileggi June 2004 Proceedings of the 41st annual conference on Design automat  Publisher: ACM Press  Full text available: pdf(271.92 KB)  Additional Information: full citation, abstract, references, on terms  In an effort to control the parameter variations and systematic yield problems		
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In an effort to control the parameter variations and systematic yield problems	oration for	
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structure have been proposed. For example, there has been speculation [6] to logic fabrics [1] based on regular geometry patterns [2] can offer tighter convariations and greater control of systematic manufacturing failures. In this padescribe a routing framework that accommodates arbitrary descripti	oration for tion DAC '04	
Keywords: BEOL, regularity	citings, index s that ularity and that regular	

11 Energy-efficient, utility accrual scheduling under resource constraints for mobile

	embedded systems	
<b>③</b>	Haisang Wu, Binoy Ravindran, E. Douglas Jensen, Peng Li August 2006 ACM Transactions on Embedded Computing Systems (TECS), Volume 5 Issue	
	Publisher: ACM Press Full text available: pdf(408.46 KB) Additional Information: full citation, abstract, references, index terms	
	We present an energy-efficient, utility accrual, real-time scheduling algorithm called ReUA. ReUA considers an application model where activities are subject to time/utility function time constraints, mutual exclusion constraints on shared non-CPU resources, and statistical performance requirements on individual activity timeliness behavior. The algorithm targets mobile embedded systems where <i>system-level</i> energy consumption is also a major concern. For such a model, we consider the schedu	
	<b>Keywords</b> : Real-time systems, energy-efficient scheduling, time/utility functions, utility accrual scheduling	
12	Exploiting Loop-Level Parallelism on Coarse-Grained Reconfigurable Architectures	· 🔲
	Using Modulo Scheduling Bingfeng Mei, Serge Vernalde, Diederik Verkest, Hugo De Man, Rudy Lauwereins March 2003 Proceedings of the conference on Design, Automation and Test in Europe - Volume 1 DATE '03 Publisher: IEEE Computer Society	•
	Full text available: pdf(143.58 KB) Additional Information: full citation, abstract, citings, index terms  Publisher Site	
	Coarse-grained reconfigurable architectures have become increasingly important in recent years. Automatic design or compilation tools are essential to their success. In this paper, we present a modulo scheduling algorithm to exploit loop-level parallelism for coarse-grained reconfigurable architectures. This algorithm is a key part of our Dynamically Reconfigurable Embedded Systems Compiler (DRESC). It is capable of solving placement, scheduling and routing of operations simultaneously in a modu	
13	Energy aware eyetems. Energy emelent, unity accorder conceduring and or recourse	
<b>②</b>	constraints for mobile embedded systems  Haisang Wu, Binoy Ravindran, E. Douglas Jensen, Peng Li  September 2004 Proceedings of the 4th ACM international conference on Embedded software EMSOFT '04	
	Publisher: ACM Press	
	Full text available: pdf(379.20 KB) Additional Information: full citation, abstract, references, index terms  We present an energy-efficient real-time scheduling algorithm called the Resource-	
	constrained Energy-Efficient Utility Accrual Algorithm (or ReUA). ReUA considers an application model where activities are subject to time/utility function-time constraints, resource dependencies including mutual exclusion constraints, and statistical performance requirements including probabilistically satisfied, activity (timeliness) utility bounds. Further, ReUA targets mobile embedded systems where syste	
	<b>Keywords</b> : energy-efficient scheduling, real-time systems, time/utility functions, utility accrual scheduling	
14	Real time resource allocation in distributed systems  John Reif, Paul Spirakis	
	August 1982 Proceedings of the first ACM SIGACT-SIGOPS symposium on Principles of distributed computing PODC '82	

**Publisher: ACM Press** 

	Full text available: pdf(852.77 KB)  Additional Information: full citation, abstract, references, citings, index terms	
	In this paper we consider a resource allocation problem which is local in the sense that the maximum number of users competing for a particular resource at any time instant is bounded and also at any time instant the maximum number of resources that a user is willing to get is bounded. The problem may be viewed as that of achieving matchings in dynamically changing hypergraphs, via a distributed algorithm. We show that this problem is related to the fundamental problem of <	
15 <b>②</b>	The design and assessment system of software margaret codesign	
	Publisher: ACM Press	
	Full text available: pdf(908.59 KB)  Additional Information: full citation, abstract, references, citings, index terms	
	Codesign of hardware and software for high performance signal processing systems is important if the potential benefits of VLSI are to be realized. This article describes a CAD system developed to support the codesign of hardware and software architectures for high performance digital signal processors which is based on a directed graph methodology. A comprehensive example is developed to demonstrate the use of the system, the fundamentals of the modeling and analysis methodology are discus	
16	Deadlock prevention, detection, and resolution: an annotated bibliography	
<b>③</b>	Glen Newton April 1979 ACM SIGOPS Operating Systems Review, Volume 13 Issue 2	
	Publisher: ACM Press	
	Full text available: <mark>和 pdf(784.98 KB)</mark> Additional Information: <u>full citation</u>	
<b>17</b> .		
17. <b>③</b>	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan	
17. <b>③</b>	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan January 2005 Proceedings of the 2005 conference on Asia South Pacific design automation ASP-DAC '05	
17 <b>③</b>	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan January 2005 Proceedings of the 2005 conference on Asia South Pacific design	
17	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan January 2005 Proceedings of the 2005 conference on Asia South Pacific design automation ASP-DAC '05 Publisher: ACM Press	
	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan January 2005 Proceedings of the 2005 conference on Asia South Pacific design automation ASP-DAC '05 Publisher: ACM Press Full text available: pdf(494.04 KB) Additional Information: full citation, abstract, references, citings  We present timing-driven partitioning and simulated annealing based placement algorithms together with a detailed routing tool for 3D FPGA integration. The circuit is first divided into layers with limited number of inter-layer vias, and then placed on individual layers, while minimizing the delay of critical paths. We use our tool as a platform to explore the potential benefits in terms of delay and wire-length that 3D technologies can	
18	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan January 2005 Proceedings of the 2005 conference on Asia South Pacific design automation ASP-DAC '05 Publisher: ACM Press Full text available: pdf(494.04 KB) Additional Information: full citation, abstract, references, citings  We present timing-driven partitioning and simulated annealing based placement algorithms together with a detailed routing tool for 3D FPGA integration. The circuit is first divided into layers with limited number of inter-layer vias, and then placed on individual layers, while minimizing the delay of critical paths. We use our tool as a platform to explore the potential benefits in terms of delay and wire-length that 3D technologies can offer for FPGA fabrics. Experimental results show on averag  Floorplanning: Layer assignment for reliable system-on-package Jacob R. Minz, Sung Kyu Lim January 2004 Proceedings of the 2004 conference on Asia South Pacific design automation: electronic design and solution fair ASP-DAC '04, Proceedings of the 2004 conference on Asia South Pacific design automation: electronic design and solution fair ASP-DAC '04	
18	Synthesis for FPGAs: Three-dimensional place and route for FPGAs Cristinel Ababei, Hushrav Mogal, Kia Bazargan January 2005 Proceedings of the 2005 conference on Asia South Pacific design automation ASP-DAC '05 Publisher: ACM Press Full text available: pdf(494.04 KB) Additional Information: full citation, abstract, references, citings  We present timing-driven partitioning and simulated annealing based placement algorithms together with a detailed routing tool for 3D FPGA integration. The circuit is first divided into layers with limited number of inter-layer vias, and then placed on individual layers, while minimizing the delay of critical paths. We use our tool as a platform to explore the potential benefits in terms of delay and wire-length that 3D technologies can offer for FPGA fabrics. Experimental results show on averag  Floorplanning: Layer assignment for reliable system-on-package Jacob R. Minz, Sung Kyu Lim January 2004 Proceedings of the 2004 conference on Asia South Pacific design automation: electronic design and solution fair ASP-DAC '04, Proceedings of the 2004 conference on Asia South Pacific design	

The routing environment for the new emerging mixed-signal System-on-Package (SOP) technology is more advanced than that of the conventional PCB or MCM technology -- pins are located at all layers of SOP packaging substrate rather than the top-most layer only. We propose a new interconnect-centric layer assignment algorithm named LA-SOP that handles arbitrary routing topologies and produces near optimal results. The contribution of this work is threefold: (i) modeling of the SOP routing resource, ...

19	Variation and yield: Performance and yield enhancement of FPGAs with within-die	
<b>③</b>	Yohei Matsumoto, Masakazu Hioki, Takashi Kawanami, Toshiyuki Tsutsumi, Tadashi Nakagawa, Toshihiro Sekigawa, Hanpei Koike	
	February 2007 Proceedings of the 2007 ACM/SIGDA 15th international symposium on Field programmable gate arrays FPGA '07	
	Publisher: ACM Press	
	Full text available: pdf(422.84 KB) Additional Information: full citation, abstract, references, index terms	
	A new method for improving the timing yield of field-programmable gate array (FPGA) devices affected by random within-die variation is proposed. By selection of an appropriate configuration from a set of functionally equivalent configurations such that the critical paths do not share same circuit resources on the FPGA, both the average critical path delay and its standard deviation are reduced substantially under conditions of large random variation. Large within-die variations of device paramet	
	Keywords: FPGA, configuration, timing yield, within-die variation	
20	Net and Pin Distribution for 3D Package Global Routing	Г
	Jacob R. Minz, Mohit Pathak, Sung Kyu Lim	
	February 2004 Proceedings of the conference on Design, automation and test in	
	Europe - Volume 2 DATE '04 Publisher: IEEE Computer Society	
	Full text available: pdf(63.91 KB) Additional Information: full citation, abstract, index terms	
	In this paper, we study the net and pin distribution problem for global routing targeting three dimensional packaging layout via System-on-Package (SOP). The routing environment for the new emerging mixed-signal SOP technology is more advanced than that of the conventional PCB or MCM technology pins are located at all layers of SOP packaging substrate rather than the top-most layer only. This is the first work to formulate and solve the multi-layer net and pin distribution for layer, wireleng	
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